Federal Trade Commission

TAR, NICOTINE, AND CARBON MONOXIDE OF THE SMOKE OF 568 VARIETIES OF DOMESTIC CIGARETTES

1993

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Source: https://www.industrydocuments.ucsf.edu/docs/snkk0001

Report of "Tar," Nicotine, and Carbon Monoxide of the Smoke of 568 Varieties of Domestic Cigarettes

This report contains data on the "tar," nicotine, and carbon monoxide content of 568 varieties of cigarettes manufactured and sold in the United States. The test results were submitted to the Federal Trade Commission (FTC) by the six largest cigarette manufacturers in the United States. These companies are the following: The American Tobacco Company; Brown & Williamson Tobacco Corporation; Liggett Group, Inc.; Lorillard, Inc.; Philip Morris, Inc.; and R. J. Reynolds Tobacco Company, Inc.

The Tobacco Institute Testing Laboratory (TITL), a private laboratory operated by the cigarette industry, conducted most of the "tar," nicotine and carbon monoxide tests for these 568 varieties. The methodology, processes and procedures that the six cigarette companies and TITL employ are identical to those the Commission, in its own testing lab, had followed in the past.[1] Harold Pillsbury, the former director of the FTC laboratory and currently a contractor to the Commission, was given unrestricted access to the TITL laboratory for the purpose

[1]The Commission determined in early 1987 to close its laboratory. The Commission found that closing the laboratory was necessary for several reasons. First, the operation of a highly complex testing program, even one limited to "tar", nicotine and carbon monoxide, was incompatible with the expertise of the agency. Secondly, the cost of the laboratory was significant, and the Commission would have had to commit significant additional funds in order to continue the program. Finally, the Commission was persuaded that the same information could be obtained from other sources, and other means were available to verify the accuracy of industry testing results.

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of reviewing the testing methodology and protocols used by the TITL and for monitoring the actual testing process.

TITL provided the results to the respective cigarette companies. The companies provided the data generated by TITL regarding their own brands to the FTC in response to compulsory process issued by the Commission requiring submission of this information. Generic and private label cigarettes, as well as new or not widely available brands, were not tested by TITL. These test results were supplied to the Commission by the manufacturer, pursuant to compulsory process. Results of such non-TITL testing are indicated by single asterisks for new and not widely available brands, and double asterisks for generic and private label brands.

The cigarettes were tested either by TITL or the manufacturers using the Cambridge Method. This methodology has been approved by the FTC and used as the standard for cigarette testing since 1966. Submitters of data have verified that the testing was conducted in accordance with the conditions prescribed by the FTC in the Federal Register, Volume 32, Number 147, Page 11178, dated August 1, 1967. Conditions for the testing of carbon monoxide content are specified in the Federal Register, Volume 45, Number 134, Page 46483, dated July 10, 1980. The conditions prescribed in the FTC's 1967 announcement are the following:

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1. Smoke cigarettes to a 23mm. butt length, or to the length of the filter and overwrap plus 3mm. if in excess of 23mm.;
2. Base results on a test of 100 (± 10%) cigarettes per brand, or type;
3. Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection;"
4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C.H. Sloan and B.J. Sublett in Tobacco Science 9, page 70, 1965, as modified by F.J. Schultz' and A.W. Spears' report published in Tobacco Vol. 162, No. 24, page 32, dated June 17, 1966, to determine the moisture content;
5. Determine and report the "tar" content after subtracting moisture and alkaloids (as nicotine) from particulate matter;
6. Report "tar" content to the nearest whole milligram and nicotine content to the nearest 1/10 milligram, (32 Fed. Reg. 11178 (1967)).

The 1980 FTC announcement contained specifications regarding a new testing methodology to be used in determining the carbon

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monoxide (CO) and nicotine content of cigarettes. These specifications are the following:

1. Determine CO concentration using a 20-port sequential smoking machine described by H.C. Pillsbury and G. Merfeld at the 32nd Tobacco Chemists Research Conference, October, 1978; or other 20-port smoking machine capable of collecting the gasses, and determining the CO using an IR Detector, such as the Filtroma SM 350;
2. The concentration of CO will be reported as milligrams per cigarette;
3. The present method for "tar" and nicotine determination will be modified to use the method described in an article entitled, "Gas Chromatographic Determination of Nicotine Contained on Cambridge Filter Pads," by John R. Wagner et al., as presented at the annual meeting of the Association of Official Analytical Chemists, October 1978. (45 Fed. Reg. 46483 (1980)).

TITL reported, and the FTC's contractor confirmed, that the cigarettes it tested were obtained by an independent company under contract to TITL. Under its contract with TITL, this

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company was to purchase two packages of every variety of cigarettes manufactured and distributed in 50 geographical locations throughout the United States. If not all varieties were available in every location, one or more additional packages of cigarettes were purchased in the areas where the respective varieties were available. This procedure of selecting cigarettes for testing replicates the one used by the FTC. Cigarettes utilized in the test represented 367 varieties of the cigarettes sold in the U.S. at the time of the purchase (1991). The additional 201 brands in this report are either generic brands, private label cigarettes or those not readily available in the United States. These 201 brands of cigarettes were tested by the manufacturers using the same methodology described above. However, the companies do not obtain the samples of the generic brands, private label cigarettes or those not readily available in the United States from a random selection from the marketplace, but from random manufacturing batches.

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The "tar" and carbon monoxide figures are rounded to the nearest milligram (mg.). Those figures with 0.5 mg. or greater are rounded up, while those with 0.4 mg. or less are rounded down. The nicotine figures are rounded to the nearest tenth of a milligram. Those with 0.05 mg. or greater are rounded up; those with 0.04 mg. or less are rounded down.

Cigarette brands with assay results of "tar" and carbon monoxide below 0.5 mg. per cigarette variety and of nicotine below 0.05 mg. are recorded in the table as <0.5, and <0.05 respectively. The table does not differentiate, nor are actual "tar" ratings provided for these cigarettes, because the currently approved testing methodology is not sufficiently sensitive to report these components at lower levels.

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The following varieties are the eleven lowest in "tar" content as tested by TITL[2]:

1.	Carlton	KFHP Ultra.....<0.5
2.	Now 100	FHP.....<0.5
3.	Now	KFHP.....<0.5
4.	Now	KFMSP.....1
5.	Now	KFSP.....1
6.	Carlton	KFSP.....1
7.	Carlton	KFMSP.....1
8.	Carlton	KFHP.....1
9.	Bristol*	KFSP Lowest.....1
10.	Cambridge*	KFSP Lowest.....1
11.	Carlton 100's	FMHP.....1

NOTE: K - King Size, F - Filter, M - Menthol, HP - Hardpack, SP - Softpack.

[2]Asterisked entries, (* - new or not readily available brand; ** - generic or private label brand), were not tested by TITL, and the data, supplied by the manufacturers, have not been verified by the FTC.

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In descending order, those ranking the ten highest in "tar" content are the following[3]:

1.	Philip Morris Commander	KNFSP.....	27
2.	Bristol	KNFSP.....	27
3.	Old Gold Straights	KNFSP.....	26
4.	GPC Approved**	KNFSP.....	26
5.	Pall Mall	KNFSP.....	26
6.	Herbert Tareyton	KNFSP.....	25
7.	Raleigh Extra*	KNFSP.....	25
8.	Lucky Strike	KNFSP.....	25
9.	Players	KNFHP.....	25
10.	English Ovals	KNFHP.....	24

Note: K - King Size, NF - Non-Filter, M - Menthol, HP - Hardpack,
SP - Softpack.

[3]Asterisked entries, (* - new or not readily available brand; ** - generic or private label brand), were not tested by TITL, and the data, supplied by the manufacturers, have not been verified by the FTC.

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On April 13, 1983, the Commission announced it had determined that its then testing methodology for "tar," nicotine, and carbon monoxide understated the measured deliveries for Brown & Williamson's Barclay cigarettes. Therefore, Barclay cigarettes would be deleted from the Commission's reports for "tar," nicotine, and carbon monoxide until a new, accurate methodology could be tested and adopted. The Commission has found that there is a significant likelihood that the same problem exists with two other Brown & Williamson varieties -- Kool Ultra and Kool Ultra 100's.

Although there have been several adaptations offered for the testing methodology, none has proven to be satisfactory. At present, other methods for testing channel ventilated cigarettes are being considered by CORESTA.[3] Commission staff is monitoring these proceedings and is continuing to search for an appropriate adaptation.

On July 25, 1986, the Commission informed Brown & Williamson that as a result of a review of data presented by Brown & Williamson regarding a "tar" and nicotine rating for two varieties of Barclay cigarettes with a new filter, the Commission

[3]CORESTA is a multinational European organization studying the testing of cigarettes.

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would authorize, under certain conditions, the following legends for advertising purposes:

1. For Barclay King size:

   3 mg. "tar," .2 mg. nicotine

   avg. per cigarette as authorized by FTC.

2. For Barclay 100's

   5 mg. "tar," .4 mg. nicotine

   avg. per cigarette as authorized by FTC.

Brown & Williamson also agreed that until it provides the Commission with data regarding "tar" and nicotine ratings for Kool Ultra and Kool Ultra 100's, the ratings for these two varieties will not be included in Commission reports.

The following pages present, in alphabetical order, the "tar," nicotine, and carbon monoxide data collected from the cigarette companies for 568 varieties of cigarettes sold domestically in 1991.

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Federal Trade Commission Tar, Nicotine, and Carbon Monoxide Report

Brand Name*,**,<	Description	TAR	NIC	CO
ALPINE	KING F SP MEN	15	1.0	15
ALPINE	100 F SP MEN	15	1.1	14
ALPINE	KING F SP MEN LT	09	0.7	10
ALPINE	100 F SP MEN LT	09	0.7	11
ALPINE	80 F HP MEN FUL FLA	15	1.0	14
ALPINE	80 F HP MEN LT	09	0.7	10
AMERICAN FILTER	100 F SP	16	1.3	16
AMERICAN FILTER	KING F SP	16	1.3	14
AMERICAN LIGHTS	100 F SP LT	12	1.0	12
AMERICAN LIGHTS	KING F SP LT	11	0.9	12
AMERICAN LIGHTS	100 F SP MEN LT	11	0.9	11
B & H DE-NIC	KING F HP MEN LT	09	0.1	08
B & H DE-NIC	100 F HP LT	08	0.1	08
B & H DE-NIC	100 F HP MEN LT	08	0.1	08
B & H DE-NIC	KING F HP LT	08	0.1	08
BARCLAY	KING F HP	04	0.3	03
BARCLAY	KING F SP	04	0.3	03
BARCLAY	100 F SP	05	0.4	04
BASIC**	KING F SP	16	1.1	NT
BASIC**	100 F SP	16	1.2	NT
BASIC**	KING F SP LT	10	0.8	NT
BASIC**	KING F SP MEN LT	11	0.8	NT
BASIC**	100 F SP LT	11	0.8	NT
BASIC**	100 F SP MEN LT	11	0.8	NT
BASIC**	KING F SP ULTRA LT	06	0.5	NT
BASIC**	100 F SP ULTRA LT	06	0.5	NT
BASIC**	KING NF SP	24	1.6	NT
BELAIR	KING F SP MEN	10	0.8	10

* New brands or brands not widely available in the marketplace—data supplied by the company.

**Private label cigarettes—data supplied by the companies.

< (less than) below the sensitivity of the testing method.

Description: F—Filter; NF—Non-Filter; MEN—Menthol; HP—Hard Pack; SP—Soft Pack; REG—Regular (70mm); K—King Size (80-85mm); 100 and 120 are in millimeter per cigarette; LT—Light; FLA—Flavor; DLX—Deluxe; 10, 25, or 30: Number of cigarettes per pack if other than 20.

TAR: Total particulate matter in milligrams per cigarette less nicotine and water.

NIC: Total alkaloids reported as milligrams of nicotine per cigarette.

CO: Carbon monoxide reported in milligrams per cigarette. "NT" entered where CO was not available.

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Brand Name*,**,<	Description	TAR	NIC	CO
BELAIR	100 F SP MEN	10	0.8	09
BELAIR	KING F SP MEN LO PRICE	14	1.2	13
BELAIR	100 F SP MEN LO PRICE	14	1.2	13
BELAIR	KING F SP MEN LT LO PRICE	09	0.8	10
BELAIR	100 F SP MEN LT LO PRICE	10	0.9	10
BENSON AND HEDGES	KING F HP	14	1.2	11
BENSON AND HEDGES	100 F HP LT	10	0.8	11
BENSON AND HEDGES	100 F HP MEN LT	11	0.8	11
BENSON AND HEDGES	100 F SP	16	1.1	15
BENSON AND HEDGES	100 F HP	16	1.1	15
BENSON AND HEDGES	100 F HP MEN	16	1.1	14
BENSON AND HEDGES	100 F SP MEN	15	1.1	15
BENSON AND HEDGES	100 F SP LT	10	0.8	11
BENSON AND HEDGES	100 F SP MEN LT	10	0.8	11
BENSON AND HEDGES	100 F HP DLX ULTRA LT	05	0.5	06
BENSON AND HEDGES	100 F HP MEN DLX ULTRA LT	05	0.4	06
BENSON AND HEDGES	KING F SP MULTI	12	0.9	10
BEST BUY**	KING F SP FUL FLA	16	1.1	NT
BEST BUY**	100 F SP FUL FLA	16	1.2	NT
BEST BUY**	KING F SP LT	10	0.8	NT
BEST BUY**	KING F SP MEN LT	11	0.8	NT
BEST BUY**	100 F SP LT	11	0.8	NT
BEST BUY**	100 F SP MEN LT	11	0.8	NT
BEST BUY**	KING F SP ULTRA LT	06	0.5	NT
BEST BUY**	100 F SP ULTRA LT	06	0.5	NT
BEST BUY**	KING NF SP	24	1.6	NT
BEST VALUE**	KING F SP FUL FLA	15	1.2	15
BEST VALUE**	100 F SP FUL FLA	15	1.2	17
BEST VALUE**	KING F SP LT	10	0.9	11
BEST VALUE**	100 F SP LT	09	0.8	11
BEST VALUE**	100 F SP ULTRA LT	05	0.5	06
BEST VALUE**	KING F SP MEN LT	11	0.9	12
BEST VALUE**	100 F SP MEN LT	11	1.0	10
BEST VALUE**	KING F SP ULTRA LT	05	0.5	07
BIG MONEY**	100 F SP MEN LT	11	0.8	NT
BRISTOL	KING F SP LT	10	0.8	12
BRISTOL	KING F SP MEN LT	10	0.8	11
BRISTOL	100 F SP LT	10	0.8	13
BRISTOL	100 F SP MEN LT	11	0.9	13
BRISTOL	KING F SP	16	1.1	16
BRISTOL	100 F SP	15	1.1	18
BRISTOL	KING NF SP	27	1.7	16
BRISTOL*	100 F SP ULTRA LT	06	0.6	07
BRISTOL*	KING F SP LOWEST	01	0.1	01
BRISTOL*	100 F SP LOWEST	02	0.2	03
BUCKS	KING F SP	14	1.0	13
BUCKS	KING F SP LT	10	0.7	11
BULL DURHAM	KING F HP	15	1.1	15

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Brand Name*,**,<	Description	TAR	NIC	CO
BULL DURHAM	KING F HP LT	10	0.8	10
CAMBRIDGE	100 F SP ULTRA	04	0.4	06
CAMBRIDGE	KING F SP LT	12	0.8	11
CAMBRIDGE	KING F SP MEN LT	12	0.9	12
CAMBRIDGE	100 F SP LT	11	0.8	13
CAMBRIDGE	100 F SP MEN LT	11	0.8	13
CAMBRIDGE	KING F SP FUL FLA	17	1.1	15
CAMBRIDGE	100 F SP FUL FLA	17	1.1	16
CAMBRIDGE*	KING F SP LOWEST	01	0.1	01
CAMBRIDGE*	100 F SP LOWEST	02	0.2	03
CAMEL	KING F SP	15	1.1	13
CAMEL	KING F HP	17	1.2	15
CAMEL	100 F SP LT	11	0.8	12
CAMEL	KING F SP LT	11	0.8	12
CAMEL	KING F HP LT	09	0.7	12
CAMEL	70 NF SP	22	1.5	13
CAMEL	100 F SP	17	1.1	16
CAMEL	85 F SP ULTRA LT	06	0.6	08
CAMEL	85 F HP ULTRA LT	06	0.5	08
CAMEL	100 F HP ULTRA LT	06	0.6	08
CAMEL*	99 F HP	18	1.3	18
CAMEL*	98 F HP LT	08	0.7	10
CAPRI	100 F HP	10	0.8	06
CAPRI	100 F HP MEN	09	0.7	06
CAPRI	120 F HP	13	1.0	09
CAPRI	120 F HP MEN	12	0.9	07
CARLTON	120 F SP	05	0.5	04
CARLTON	KING F SP	01	0.1	02
CARLTON	120 F SP MEN	05	0.5	04
CARLTON	KING F SP MEN	01	0.1	02
CARLTON	KING F HP	01	0.2	02
CARLTON	100 F HP	01	0.1	02
CARLTON	100 F SP	02	0.2	02
CARLTON	100 F HP MEN	01	0.1	01
CARLTON	100 F SP MEN	02	0.2	03
CARLTON	KING F HP ULTRA	<0.5	<0.05	<0.5
CARTIER VENDOME	100 F HP	08	0.7	07
CARTIER VENDOME	100 F HP 10	09	0.7	08
CARTIER VENDOME	100 F HP MEN	09	0.7	07
CARTIER VENDOME	100 F HP MEN 10	08	0.7	07
CENTURY	KING F SP 25	15	1.0	17
CENTURY	KING F SP LT 25	08	0.7	10
CENTURY	100 F SP 25	16	1.2	19
CENTURY	100 F SP LT 25	11	1.0	12
CENTURY	100 F SP MEN LT 25	11	0.8	13
CHELSEA*	100 F HP MEN	10	0.7	10
CHELSEA	100 F HP	10	0.8	10
CHESTERFIELD	REG NF SP	18	1.1	11

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Brand Name*,**,<	Description	TAR	NIC	CO
CHESTERFIELD	KING NF SP	22	1.4	14
CHESTERFIELD	KING F SP LT	10	0.7	11
CHESTERFIELD	100 F SP LT	10	0.8	11
CLASS A*	REG NF SP	19	1.3	11
CLASS A*	KING NF SP	23	1.6	13
CLASS A*	KING F SP FUL FLA	15	1.1	14
CLASS A*	KING F SP MEN FUL FLA	16	1.3	14
CLASS A*	100 F SP FUL FLA	15	1.1	14
CLASS A*	100 F SP MEN FUL FLA	17	1.4	15
CLASS A*	KING F SP LT	11	1.0	12
CLASS A*	KING F SP MEN LT	11	1.0	12
CLASS A*	100 F SP LT	12	1.1	13
CLASS A*	100 F SP MEN LT	12	1.1	13
CLASS A*	KING F SP ULTRA LT	06	0.7	06
CLASS A*	KING F SP MEN ULTRA LT	06	0.7	06
CLASS A*	100 F SP ULTRA LT	06	0.7	05
CLASS A*	100 F SP MEN ULTRA LT	06	0.7	05
CLASS A DELUXE	KING F SP DLX FUL FLA	15	1.1	14
CLASS A DELUXE	100 F SP DLX FUL FLA	15	1.1	14
CLASS A DELUXE	KING F SP DLX LT	12	0.9	12
CLASS A DELUXE*	KING F SP MEN DLX LT	11	1.0	12
CLASS A DELUXE	100 F SP DLX LT	11	0.9	12
CLASS A DELUXE*	100 F SP MEN DLX LT	12	1.1	13
CLASS A DELUXE	100 F SP DLX ULTRA LT	06	0.5	06
COST CUTTER*	KING F SP FUL FLA	15	1.2	15
COST CUTTER*	100 F SP FUL FLA	15	1.2	17
COST CUTTER*	KING F SP LT	10	0.9	11
COST CUTTER*	100 F SP LT	09	0.8	09
COST CUTTER*	100 F SP ULTRA LT	05	0.5	06
COST CUTTER*	KING F SP MEN LT	11	0.9	12
COST CUTTER*	100 F SP MEN LT	11	1.0	10
DAKOTA*	85 F HP MEN FUL FLA	16	1.2	15
DAKOTA	KING F HP LT	11	0.9	11
DAKOTA*	KING F HP FUL FLA	16	1.2	15
DAKOTA	KING F HP LT	11	0.9	11
DAKOTA*	100 F HP FUL FLA	17	1.2	16
DAKOTA*	100 F HP LT	12	0.9	13
DORAL	KING F SP LT	10	0.8	11
DORAL	KING F SP MEN LT	10	0.9	10
DORAL	100 F SP LT	11	0.9	10
DORAL	100 F SP MEN LT	09	0.7	13
DORAL	KING F SP FUL FLA	15	1.2	14
DORAL	100 F SP FUL FLA	16	1.2	16
DORAL	100 F SP ULTRA LT	05	0.5	07
DORAL	KING F SP MEN FUL FLA	16	1.2	15
DORAL	100 F SP MEN FUL FLA	16	1.2	17
DORAL	KING F SP ULTRA LT	05	0.5	07
ENGLISH OVAL	KING NF HP	24	1.9	15

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Brand Name*,**,<	Description	TAR	NIC	CO
EVE	120 F HP LT	13	1.0	11
EVE	120 F HP MEN LT	13	1.0	11
EVE	120 F HP ULTRA LT	05	0.5	04
EVE	120 F HP MEN ULTRA LT	05	0.5	04
EVE	100 F HP MEN ULTRA LT SLIM	06	0.6	05
EVE	100 F HP ULTRA LT SLIM	06	0.5	04
F & L**	KING F HP LT	10	0.8	NT
F & L**	100 F SP ULTRA LT	06	0.5	NT
F & L**	KING F SP MEN LT	11	0.8	NT
F & L**	KING F SP LT	10	0.8	NT
F & L**	100 F SP LT	11	0.8	NT
F & L**	100 F SP MEN LT	11	0.8	NT
FAMOUS VALUE**	KING F SP FUL FLA	16	1.1	NT
FAMOUS VALUE**	KING F SP LT	11	0.8	NT
FAMOUS VALUE**	KING F SP MEN LT	11	0.8	NT
FAMOUS VALUE**	100 F SP FUL FLA	16	1.2	NT
FAMOUS VALUE**	100 F SP LT	11	0.8	NT
FAMOUS VALUE**	100 F SP MEN LT	10	0.8	NT
FAMOUS VALUE**	KING F SP ULTRA LT	06	0.5	NT
FAMOUS VALUE**	100 F SP ULTRA LT	05	0.5	NT
FAMOUS VALUE**	KING NF SP	24	1.6	NT
GEN/PRI LABEL**	KING NF SP	23	1.6	13
GEN/PRI LABEL**	KING F SP FUL FLA	16	1.3	14
GEN/PRI LABEL**	100 F SP FUL FLA	17	1.4	15
GEN/PRI LABEL**	KING F SP MEN FUL FLA	16	1.3	14
GEN/PRI LABEL**	100 F SP MEN FUL FLA	17	1.4	15
GENCO**	KING NF SP	24	1.6	NT
GENCO**	KING F SP	16	1.1	NT
GENCO**	100 F SP	11	0.8	NT
GENCO**	KING F SP LT	10	0.8	NT
GENCO**	KING F SP MEN LT	11	0.8	NT
GENCO**	100 F SP LT	16	1.2	NT
GENCO**	100 F SP MEN LT	11	0.8	NT
GENCO**	KING F SP ULTRA LT	06	0.5	NT
GENCO**	100 F SP ULTRA LT	06	0.5	NT
GENERIC**	KING F SP ULTRA LT	06	0.7	06
GENERIC**	100 F SP ULTRA LT	06	0.7	05
GENERIC**	KING F SP MEN LT	11	1.0	12
GENERIC**	KING F SP LT	11	1.0	12
GENERIC**	100 F SP MEM LT	12	1.1	13
GENERIC**	100 F SP LT	12	1.1	13
GENERIC**	KING F HP LT	11	1.0	12
GOLDEN LIGHTS	KING F SP LT	08	0.7	10
GOLDEN LIGHTS	KING F SP MEN LT	08	0.7	11
GOLDEN LIGHTS	100 F SP LT	09	0.8	10
GOLDEN LIGHTS	100 F SP MEN LT	09	0.8	10
GOLDEN LIGHTS	KING F HP LT	07	0.6	09
GOLDEN LIGHTS	100 F HP LT	09	0.7	10

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Brand Name*,**,<	Description	TAR	NIC	CO
GPA**	KING NF SP	24	1.6	NT
GPA**	KING F SP	16	1.1	NT
GPA**	100 F SP	16	1.2	NT
GPA**	KING F SP LT	10	0.8	NT
GPA**	KING F SP MEN LT	11	0.8	NT
GPA**	100 F SP LT	11	0.8	NT
GPA**	100 F SP MEN LT	11	0.8	NT
GPA**	KING F SP ULTRA LT	06	0.5	NT
GPA**	100 F SP ULTRA LT	06	0.5	NT
GPC**	KING F HP FUL FLA	18	1.0	15
GPC**	KING F HP LT	11	0.8	12
GPC APPROVED**	REG NF SP PLAIN	26	1.5	17
GPC APPROVED**	KING F SP LT	11	0.1	12
GPC APPROVED**	100 F SP LONG LT	11	0.8	12
GPC APPROVED**	KING F SP MEN LT	10	0.1	10
GPC APPROVED**	100 F SP MEN LT	09	0.7	08
GPC APPROVED**	KING F SP ULTRA LT	06	0.5	07
GPC APPROVED**	100 F SP ULTRA LT	06	0.5	07
GPC APPROVED**	KING F SP	18	1.0	15
GPC APPROVED**	100 F SP	16	1.0	16
GPC APPROVED**	KING F SP MEN	16	1.0	14
GPC APPROVED**	100 F SP MEN	15	1.0	16
GRIDLOCK**	KING NF SP	24	1.6	NT
GRIDLOCK**	KING F SP FUL FLA	16	1.1	NT
GRIDLOCK**	100 F SP LT	11	0.8	NT
GRIDLOCK**	100 F SP ULTRA LT	06	0.5	NT
GRIDLOCK**	100 F SP FUL FLA	16	1.2	NT
HARLEY DAVIDSON	KING F SP	11	0.8	12
HARLEY DAVIDSON	KING F SP LT	08	0.7	11
HERBERT TAREYTON	KING NF SP	25	1.7	18
HERITAGE LIGHTS	100 F SP LT	11	0.9	14
HERITAGE LIGHTS	KING F SP LT	10	0.9	12
HI-LITE	100 F HP	13	1.1	13
HORIZON	100 F SP LT	11	0.8	11
HORIZON	100 F SP MEN LT	11	0.9	11
HORIZON*	85 F SP LT	11	0.8	12
HORIZON*	85 F SP MEN LT	11	0.8	12
KENT	KING F SP	12	0.9	13
KENT	100 F SP	13	0.9	13
KENT	KING F HP	11	0.8	12
KENT	100 F SP MEN	13	1.0	13
KENT	KING F SP III	03	0.4	04
KENT	100 F SP PLAIN III	05	0.5	06
KENT	100 F HP III	04	0.4	06
KOOL	100 F SP MEN SUPER LG	16	1.2	16
KOOL	REG NF SP MEN	21	1.3	13
KOOL	KING F SP MEN	16	1.1	16
KOOL	KING F HP MEN	15	1.0	15

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Brand Name*,**,<	Description	TAR	NIC	CO
KOOL	KING F SP MEN LT	08	0.7	08
KOOL	100 F SP MEN LT	08	0.7	09
KOOL	KING F SP MEN MILD	11	0.9	12
KOOL	100 F SP MEN MILD	12	0.9	12
KOOL	KING F SP MEN ULTRA	02	0.2	02
KOOL	100 F SP MEN ULTRA	05	0.5	05
KOOL	KING F HP MEN MILD	12	0.9	11
KOOL*	KING F SP MEN ULTRA LT	06	0.6	06
KOOL	LONG F SP MEN ULTRA LT	06	0.6	07
KOOL DELUXE	KING F HP MEN LT	09	0.8	10
KOOL DELUXE	LONG F HP MEN LT	10	0.9	10
KOOL DELUXE	LONG F HP MEN ULTRA LONG	06	0.6	07
L AND M	KING F SP	13	1.0	12
L AND M	KING F HP	13	0.9	12
L AND M	100 F SP LT 30	11	0.9	09
L AND M	100 F SP LT LONG	08	0.8	06
L AND M	100 F SP SUPER KING	11	0.9	12
L AND M	100 F SP FUL 10PK-30	14	1.1	13
L AND M	100 F SP ULT LT 10PK-30	06	0.5	05
LARK	KING F SP LT	12	0.9	10
LARK	100 F SP LT	12	1.0	11
LARK	KING F SP	13	1.0	12
LARK	100 F SP EXTRA LONG	14	1.1	13
LUCKY STRIKE	REG NF SP	25	1.6	16
LUCKY STRIKE	KING F SP	13	1.0	13
LUCKY STRIKE	KING F HP	13	1.0	13
LUCKY STRIKE	100 F SP	13	1.1	13
LUCKY STRIKE	KING F SP LT	08	0.7	10
LUCKY STRIKE	100 F SP LT	09	0.8	10
MAGNA	KING F SP	15	1.2	15
MAGNA	KING F HP	16	1.2	15
MAGNA	KING F SP LT	12	0.8	13
MAGNA	KING F HP LT	11	0.8	12
MALIBU	100 F SP	15	1.2	15
MALIBU	100 F SP LT	09	0.8	11
MALIBU	100 F SP MEN	11	1.0	11
MALIBU	KING F SP	15	1.2	14
MALIBU	KING F SP LT	09	0.7	09
MALIBU	KING F SP MEN	16	1.3	14
MALIBU	100 F SP ULTRA LT	06	0.5	07
MARLBORO	79 F HP	16	1.1	14
MARLBORO	KING F SP	16	1.1	14
MARLBORO	KING F SP 25	16	1.1	14
MARLBORO	KING F SP MEN	16	1.0	15
MARLBORO	100 F SP	16	1.2	15
MARLBORO	100 F HP	16	1.1	15
MARLBORO	KING F SP LT	11	0.8	11
MARLBORO	KING F SP LT 25	11	0.8	11

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Brand Name*,**,<	Description	TAR	NIC	CO
MARLBORO	KING F HP LT	11	0.8	11
MARLBORO	100 F SP LT	10	0.8	11
MARLBORO	100 F HP LT	11	0.8	12
MARLBORO	100 F HP MEN LT	09	0.8	10
MARLBORO	KING F HP MEN LT	10	0.8	10
MARLBORO	KING F HP ULTRA LT	06	0.5	06
MARLBORO	100 F HP ULTRA LT	06	0.5	07
MARLBORO*	KING F HP MEN	15	1.0	15
MARLBORO*	KING F HP MEDIUM	12	0.8	12
MARLBORO*	KING F SP MEDIUM	12	0.8	13
MAX	120 F SP	16	1.2	16
MAX	120 F SP MEN	16	1.2	16
MERIT	KING F SP	07	0.6	09
MERIT	KING F SP MEN	08	0.6	09
MERIT	100 F SP	10	0.8	11
MERIT	100 F SP MEN	10	0.8	11
MERIT	KING F HP	08	0.6	09
MERIT	KING F SP ULTRA LT	05	0.5	05
MERIT	100 F SP ULTRA LT	05	0.5	06
MERIT	KING F SP MEN ULTRA LT	05	0.4	06
MERIT	100 F SP MEN ULTRA LT	05	0.5	07
MERIT	KING F HP ULTRA LT	05	0.4	06
MERIT	100 F HP ULTRA LT	05	0.5	07
MERIT DE-NIC*	KING F SP	09	0.1	07
MERIT DE-NIC*	KING F SP MEN	08	0.1	06
MERIT DE-NIC*	KING F SP ULTRA	04	0.1	02
MERIT DE-NIC*	KING F SP MEN ULTRA	04	0.1	03
MISTY SLIMS	100 F HP LT	09	0.8	09
MISTY SLIMS	100 F HP LT MEN	08	0.7	08
MONEY**	KING F SP MEN LT	11	0.8	NT
MONTCLAIR	100 F SP	16	1.2	16
MONTCLAIR	100 F SP LT	12	1.0	13
MONTCLAIR	100 F SP MEN LT	12	1.0	13
MONTCLAIR	KING F SP LT	11	0.9	12
MONTCLAIR	KING F SP MEN LT	11	0.9	12
MONTCLAIR	KING F SP	16	1.2	14
MONTCLAIR	100 F SP ULTRA LT	06	0.5	07
MORE	120 F SP	16	1.2	19
MORE	100 F HP LT	09	0.8	10
MORE	120 F SP MEN	16	1.4	19
MORE	100 F HP MEN LT	09	0.7	09
MORE	120 F SP MEN LT	11	1.0	17
MORE	120 F SP LT	12	0.9	18
MORE	120 F SP WHT LT	12	0.9	16
MORE	120 F SP MEN WHT LT	12	1.0	16
NEWPORT	KING F SP MEN	17	1.3	17
NEWPORT	KING F SP MEN 25	17	1.3	17
NEWPORT	100 F SP MEN	19	1.4	19

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Brand Name*,**,<	Description	TAR	NIC	CO
NEWPORT	100 F SP MEN 25	18	1.4	19
NEWPORT	KING F HP MEN	16	1.2	16
NEWPORT	KING F SP MEN LT	08	0.7	11
NEWPORT	100 F SP MEN LT	09	0.8	10
NEWPORT	KING F HP MEN LT	08	0.8	11
NEWPORT	100 F HP MEN	19	1.4	19
NEWPORT	100 F HP MEN LT	08	0.7	09
NEWPORT	100 F HP STRIPES	11	0.9	14
NEWPORT STRIPE	100 F HP MEN SLIM LT	10	0.8	11
NEWPORT STRIPE	100 F HP	11	0.9	14
NEXT	KING F SP MEN LO TAR	09	0.1	08
NEXT	100 F SP LO TAR	09	0.1	09
NEXT*	100 F SP MEN LO TAR	09	0.1	07
NEXT*	KING F SP ULTRA LO TAR	05	0.1	05
NEXT*	KING F SP MEN ULTRA LO TAR	03	0.1	03
NEXT*	100 F SP ULTRA LO TAR	04	0.1	04
NEXT*	100 F SP MEN ULTRA LO TAR	06	0.1	05
NEXT	KING F SP LO TAR	09	0.1	09
NO FRILLS**	KING F SP LT	10	0.8	NT
NO FRILLS**	KING F SP MEN LT	11	0.8	NT
NO FRILLS**	100 F SP LT	11	0.8	NT
NO FRILLS**	100 F SP ULTRA LT	06	0.5	NT
NO FRILLS**	100 F SP FUL FLA	16	1.2	NT
NO FRILLS**	100 F SP MEN LT	11	0.8	NT
NO FRILLS**	KING F SP ULTRA LT	06	0.5	NT
NO FRILLS**	KING F SP	16	1.1	NT
NOW	100 F SP	02	0.2	03
NOW	KING F SP	01	0.1	02
NOW	100 F SP MEN	02	0.2	03
NOW	KING F SP MEN	01	0.1	02
OLD GOLD	KING F SP	17	1.3	17
OLD GOLD	100 F SP	18	1.4	18
OLD GOLD	KING NF SP STRIGHT	26	1.8	18
OLD GOLD	KING F SP LT	08	0.7	10
OLD GOLD	100 F SP LT	12	1.0	14
PALL MALL	KING NF SP	26	1.8	16
PALL MALL	100 F SP LT	09	0.8	11
NOW	KING F HP	<0.5	<0.05	<0.5
NOW	100 F HP	<0.5	<0.05	<0.5
PALL MALL	100 F SP	15	1.2	14
PALL MALL	KING F SP RED	15	1.2	13
PALL MALL	100 F SP RED	15	1.2	14
PALL MALL GOLD	100 F SP LT	15	1.2	14
PARLIAMENT	KING F HP LT	09	0.7	09
PARLIAMENT	KING F SP LT	09	0.7	10
PARLIAMENT	100 F SP LT	12	0.9	11
PHILIP MORRIS	KING NF SP COM	27	1.7	16
PHILIP MORRIS	REG NF SP	22	1.4	12

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Brand Name[*,**,<]	Description	TAR	NIC	CO
PHILIP MORRIS	100 F HP INTL	16	1.1	15
PHILIP MORRIS	100 F HP MEN INTL	16	1.2	15
PICAYUNE*	REG NF SP	18	1.2	12
PLAYERS	REG NF HP	25	1.8	15
PLAYERS	KING F HP	11	0.8	11
PLAYERS	KING F HP MEN	11	0.8	11
PLAYERS	100 F HP	14	1.0	12
PLAYERS	100 F HP MEN	14	1.0	12
PLAYERS	KING F SP LT 25	10	0.8	10
PLAYERS	KING F SP MEN LT 25	10	0.8	10
PLAYERS	100 F SP LT 25	11	0.9	13
PLAYERS	100 F SP MEN LT 25	11	0.9	13
PYRAMID	KING F SP LT	11	0.8	12
PYRAMID	100 F SP LT	11	0.9	12
PYRAMID	100 F SP MEN LT	11	0.9	12
PYRAMID	KING NF SP	21	1.3	14
PYRAMID	100 F SP ULTRA LT	05	0.5	05
PYRAMID	KING F SP FUL FLA	14	1.0	13
PYRAMID	KING F SP MEN FUL FLA	13	1.0	13
PYRAMID	100 F SP FUL FLA	15	1.1	14
PYRAMID	100 F SP MEN FUL FLA	14	1.1	14
RALEIGH	KING F SP	15	1.0	14
RALEIGH	100 F SP	15	1.0	15
RALEIGH	KING F SP LT	11	0.9	12
RALEIGH	100 F SP LT	12	0.9	14
RALEIGH	REG NF SP	23	1.4	16
RALEIGH EXTRA	KING F SP	17	1.0	17
RALEIGH EXTRA	100 F SP	16	0.9	18
RALEIGH EXTRA	KING F SP LT	11	0.7	13
RALEIGH EXTRA	LONG F SP LT	12	0.8	15
RALEIGH EXTRA	KING F SP MEN LT	10	0.7	11
RALEIGH EXTRA*	KING F SP ULTRA LT	06	0.5	07
RALEIGH EXTRA*	LONG F SP ULTRA LT	06	0.5	07
RALEIGH EXTRA*	KING NF SP	25	1.3	17
RALEIGH EXTRA	100 F SP MEN LONG LT	09	0.7	10
RICHLAND	KING F SP	17	1.2	14
RICHLAND	KING F SP 25	17	1.2	14
RICHLAND	KING F SP MEN	16	1.1	15
RICHLAND	KING F SP MEN 25	16	1.0	15
RICHLAND	KING F SP LT 25	12	0.9	12
RICHLAND	KING F SP LT	12	0.9	12
RICHLAND	100 F SP	17	1.3	16
RICHLAND	100 F SP 25	18	1.3	16
RICHLAND	100 F SP LT	13	1.0	14
RICHLAND	100 F SP LT 25	13	0.9	14
RICHLAND	100 F SP MEN LONG	16	1.1	16
RITZ	100 F HP MEN	11	0.9	11
RITZ	100 F HP	10	0.8	10

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Brand Name*,**,<	Description	TAR	NIC	CO
RIVIERA**	KING F HP MEN	17	1.2	16
RIVIERA**	100 F HP MEN	17	1.2	17
SALEM	KING F SP MEN	17	1.3	16
SALEM	85 F HP MEN	17	1.2	16
SALEM	100 F SP MEN LT	08	0.7	10
SALEM	KING F SP MEN LT	10	0.7	12
SALEM	100 F SP MEN	17	1.2	16
SALEM	100 F HP MEN SLIM LT	09	0.7	09
SALEM	KING F SP MEN ULTRA LT	05	0.4	07
SALEM	100 F SP MEN ULTRA LT	05	0.4	07
SALEM	100 F HP MEN LT CUS CASE	12	0.9	11
SALEM	85 F SP MEN GOLD	17	1.2	NT
SARATOGA	120 F HP	14	1.1	14
SARATOGA	120 F HP MEN	14	1.1	13
SATIN	100 F SP	11	0.9	13
SATIN	100 F SP MEN	11	0.9	13
SAVVY**	100 F SP LT	10	0.9	11
SAVVY**	100 F SP MEN LT	10	0.9	11
SAVVY**	100 F SP ULTRA LT	05	0.5	05
SCOTCH BUY**	KING F SP FUL FLA	15	1.2	15
SCOTCH BUY**	100 F SP FUL FLA	15	1.2	17
SCOTCH BUY**	KING F SP LT	10	0.9	11
SCOTCH BUY**	100 F SP LT 100	09	0.8	09
SCOTCH BUY**	KING F SP MEN LT	11	0.9	12
SCOTCH BUY**	100 F SP MEN LT	11	1.0	10
SCOTCH BUY**	100 F SP ULTRA LT	05	0.5	06
SCOTCH BUY**	KING F SP ULTRA LT	05	0.5	07
SILVA THINS	100 F HP	11	0.9	11
SILVA THINS	100 F HP MEN	12	1.0	11
SPRING	100 F SP MEN	19	1.5	19
SPRING*	KING F SP MEN LEMON LT	08	0.7	12
SPRING*	100 F SP MEN LT LEMON	10	0.8	14
STERLING	100 F SP FUL FLA	15	1.1	16
STERLING	100 F SP MEN FUL FLA	16	1.2	16
STERLING	100 F SP LT	10	0.8	11
STERLING	100 F SP MEN LT	09	0.8	10
STERLING*	KING F SP FUL FLA	14	1.0	15
STERLING*	KING F SP MEN FUL FLA	14	1.0	15
STERLING*	KING F SP LT	09	0.8	12
STERLING*	KING F SP MEN LT	10	0.7	12
STERLING*	100 F HP SLIM LT	08	0.7	09
STERLING*	100 F HP MEN SLIM LT	08	0.7	09
STERLING*	100 F SP ULTRA LT	04	0.4	07
STERLING*	100 F SP MEN ULTRA LT	04	0.4	07
STYLE	100 F HP LT	11	0.9	13
STYLE	100 F HP MEN LT	11	0.9	13
STYLE ULTRA	100 F HP LT	04	0.4	05
TALL	120 F SP	17	1.4	18

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Brand Name*,**,<	Description	TAR	NIC	CO
TALL	120 F SP MEN	16	1.4	14
TAREYTON	KING F SP	14	1.0	15
TAREYTON	100 F SP	14	1.0	17
TAREYTON	KING F SP LT	05	0.5	06
TAREYTON	100 F SP LONG LT	08	0.7	08
TRIUMPH	KING F SP	03	0.3	04
TRIUMPH	KING F SP MEN	04	0.4	04
TRIUMPH	100 F SP	05	0.4	06
TRIUMPH	100 F SP MEN	05	0.5	06
TRUE	KING F SP	04	0.4	05
TRUE	KING F SP MEN	04	0.4	05
TRUE	100 F SP	06	0.6	07
TRUE	100 F SP MEN	06	0.6	07
TRUE*	KING F HP	04	0.4	05
TRUE*	100 F HP	06	0.6	07
VALUE & QUALITY**	85 F SP FUL FLA	15	1.2	15
VALUE & QUALITY**	100 F SP FUL FLA	15	1.2	17
VALUE & QUALITY**	85 F SP LT	10	0.9	11
VALUE & QUALITY**	100 F SP LT	09	0.8	09
VALUE & QUALITY**	85 F SP MEN LT	11	0.9	12
VALUE & QUALITY**	100 F SP MEN LT	11	1.0	10
VALUE & QUALITY**	100 F SP ULTRA LT	05	0.5	06
VALUE & QUALITY**	85 F SP ULTRA LT	05	0.5	07
VANTAGE	100 F SP	09	0.7	10
VANTAGE	KING F SP	09	0.6	10
VANTAGE	100 F SP ULTRA LT	05	0.4	07
VANTAGE	KING F SP ULTRA LT	05	0.4	07
VANTAGE	KING F SP MEN	09	0.7	12
VANTAGE*	83 F HP ULTRA LT	05	0.4	06
VANTAGE*	100 F HP ULTRA LT	04	0.4	07
VANTAGE	100 F SP MEN	08	0.6	11
VICEROY	KING F SP	17	1.2	14
VICEROY	100 F SP	17	1.2	15
VICEROY	KING F SP LT	11	0.9	12
VICEROY	100 F SP LT	12	0.9	13
VICEROY	KING F HP	16	1.1	14
VICEROY	100 F HP	16	1.2	14
VICEROY	KING F HP LT	11	0.9	12
VICEROY	100 F HP LT	12	0.9	14
VIRGINIA SLIMS	100 F SP SLIM	15	1.0	13
VIRGINIA SLIMS	100 F SP MEN SLIM	15	1.0	12
VIRGINIA SLIMS	100 F HP SLIM LT	08	0.7	08
VIRGINIA SLIMS	100 F HP MEN SLIM LT	08	0.7	08
VIRGINIA SLIMS	120 F HP SLIM LT	14	1.1	13
VIRGINIA SLIMS	120 F HP MEN SLIM LT	13	1.0	13
VIRGINIA SLIMS	100 F HP ULTRA LT	06	0.5	06
VIRGINIA SLIMS	100 F HP MEN ULTRA LT	05	0.5	05
VIRGINIA SLIMS	100 F HP SUPER SLIM	06	0.5	07

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Brand Name*,**,<	Description	TAR	NIC	CO
VIRGINIA SLIMS	100 F HP MEN SUPER SLIM	06	0.5	06
WINSTON	100 F SP	17	1.1	17
WINSTON	KING F SP	18	1.5	14
WINSTON	KING F HP	17	1.2	16
WINSTON	100 F SP LT	11	0.8	12
WINSTON	KING F SP LT	10	0.7	11
WINSTON	KING F HP LT	09	0.7	12
WINSTON	100 F SP ULTRA LT	04	0.4	06
WINSTON	KING F SP ULTRA LT	06	0.6	08
WINSTON	100 F HP LT	11	0.8	12
WINSTON*	83 F HP ULTRA LT	06	0.5	08
WINSTON*	100 F HP ULTRA LT	06	0.6	07

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